

Date: Thursday, 19/03/2009 4:30:52 PM  
 User: Julie Dawson

## Process Sheet

SPUR

Customer : CU-DAR001 Dart Helicopters Services  
 Job Number : 46615 - 1  
 Estimate Number : 10351  
 P.O. Number :  
 This Issue : 19/03/2009 S.O. No. :  
 Prsht Rev. : NC  
 First Issue : / / Type : MACHINED PARTS  
 Previous Run : 40494  
 Written By :  
 Checked & Approved By : JUD 09.03.19  
 Comment : Est:A 01.07.11 New Issue SM/EC

Drawing Name : CLAMP  
 Part Number : D30413  
 Drawing Number : D3041 REV C  
 Project Number : N/A  
 Drawing Revision : C  
 Material :  
 Due Date : 06/04/2009 Qty: 40 Um: Each

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 D2423 Lug Extrusion



1/46 f(s) 4.58 A(s)

Comment: Qty.: 0.1094 f(s)/Unit Total: 4.3784 f(s)

Lug Extrusion  
(D2423)

Batch: B45800

SA 09/03/25

(42)

2.0 BAND SAW BAND SAW



Comment: BAND SAW

Cut D2423 Extrusion: 1.250" Long

SA 09/03/25

(42)

3.0 HAAS1 HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1

Check for cracks while loading into the machine  
 Machine as per Folio FA153 and Dwg D3041  
~~Tumble and~~ Deburr rough edges after tumbling  
 Identify as D3041-3

86 09/03/31  
 H.A 09/03/30

PTO  
 (40)

4.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

H.A 09/03/30

5.0 QC8 SECOND CHECK



Comment: SECOND CHECK

J.F. 09/04/01 (40)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: D3041-3 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: D Date: 09/09/15

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR: <u>46615</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>09/03/15</u>	<u>3.0</u>	<u>Part Moore IN vise and pop out. Qty. 4</u>  <u>R.C. operator even.</u>	<u>[Signature]</u>	<u>Scrap / <del>replace</del></u>  <u>Replace 645800 x4</u>	<u>[Signature]</u> <u>09/03/15</u>	<u>J.F.</u> <u>09/10/14</u>	<u>[Signature]</u>	<u>[Signature]</u>
		<u>put part crooked IN 2<sup>nd</sup> vise</u> <u>so IN 4<sup>th</sup> vise part moore</u> <u>and pop out. and Tooling</u> <u>was old. Employee in</u> <u>training</u>	<u>[Signature]</u>				<u>[Signature]</u>	<u>[Signature]</u>

NOTE: Date & initial all entries



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Drawing Name: CLAMP

Job Number: 46615

Part Number: D30413

Job Number:



Seq. #: Machine Or Operation: Description :

6.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1  
Acid etch and Alodine as per QSI 005 4.1

sl

09-04-02

(40)

7.0 POWDER COATING POWDER COATING



Comment: POWDER COATING  
Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3  
Mask inside of 0.8120" diameter hole

m110939

START TIME: 7:20  
OVEN TEMPERATURE: 320°  
FINISH TIME: 7:50

FL 09/04/09

(40)

8.0 QC3 INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

09-04-09

10

9.0 D2611 Bearing



Comment: Qty.: 1.0000 Each(s)/Unit Total : 40.0000 Each(s)  
Bearing  
Pick:  
Qty Part Number Description Batch  
1 D2611 Bearing B42577

PC 9/4/09  
13

10.0 SMALL FAB 1 SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1  
1- Press D2611 bearing into lug as per Dwg D3041  
2- Stake bearing into place as per Dwg D3041  
3-Touch up stake marks with white emeron paint

FF 09-04-09

\*\*PLEASE SEE JASON BEFORE PRESSING  
BEARINGS FOR NEW TOOLING \*\*

EP 09/04/09 (13)

11.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Soslo409 (43)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Drawing Name: CLAMP

Job Number: 46615

Part Number: D30413

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: \_\_\_\_\_

PPP 46571 x8 PPP46572 x5

09/04/09 (13)

13.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

09/04/14

Job Completion



MF  
09-04-09

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> <del>55674</del> 46615
<b>Description:</b> CLAMP		<b>Part Number:</b> D3041-3
<b>Inspection Dwg:</b> D3041	<b>Rev:</b> C	<b>Page 1 of 1</b>

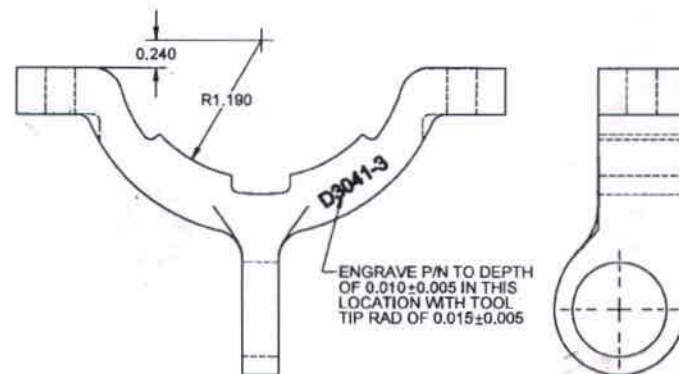
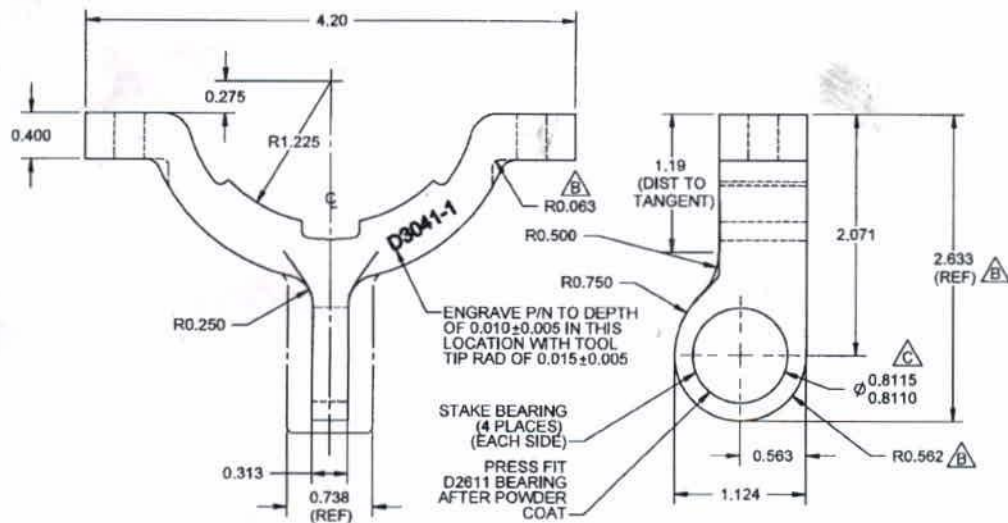
### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
4.20	+/- .030	4.201	✓			
0.240	+/- .010	0.238	✓			
R1.190	+/- .010	R1.190	✓			
0.400	+/- .010	0.397	✓			
R0.250	+/- .010	R0.250	✓			
0.313	+/- .010	0.315	✓			
R0.063	+/- .010	R0.063	✓			
1.19	+/- .030	1.19	✓			
1.124	+/- .010	1.127	✓			
0.563	+/- .010	0.563	✓			
R0.562	+/- .010	R0.562	✓			
Ø0.8115-0.8110	<del>MAXIMUM</del>	Ø0.8110	✓			
2.071	+/- .010	2.070	✓			
0.750	+/- .010	0.748	✓			
0.375	+/- .010	0.378				
R0.338	+/- .010	R0.338	✓			
3.450	+/- .010	3.449	✓			
Ø0.257	+1.005/- .000	Ø0.259	✓			
R0.375	+/- .010	R0.375	✓			
0.375	+/- .010	0.376	✓			
R0.032	+/- .010	R0.032	✓			
R0.250	+/- .010	R0.250	✓			

<b>Measured by:</b> M.A	<b>Audited by:</b> J.F.	<b>Prototype Approval:</b>	N/A
<b>Date:</b> 09/03/30	<b>Date:</b> 09/04/01	<b>Date:</b>	N/A

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	



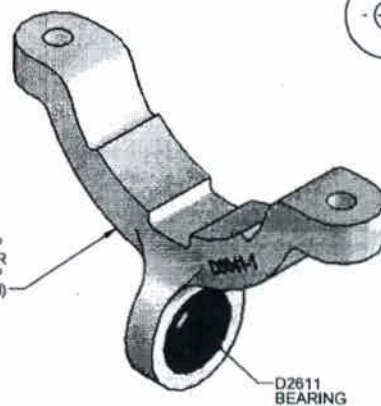
RELEASED

06.11.17

**D3041-3 CLAMP**  
(SAME AS D3041-1  
EXCEPT AS SHOWN)

**D3041-1 CLAMP**

D3041-1 CLAMP  
(SHOWN) OR  
D3041-3 CLAMP  
(NOT SHOWN)



**NOTES:**

- 1) MATERIAL: MANUFACTURE FROM D2423 EXTRUSION
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP CORNERS 0.010 TO 0.020
- 6) STAKE D2611 BEARING AFTER POWDER COAT
- 7) PART IS SYMMETRIC ABOUT  $\phi$

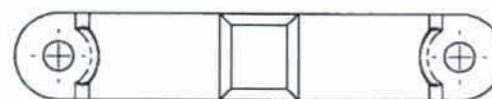
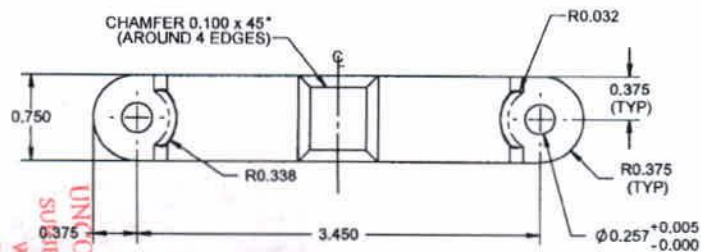
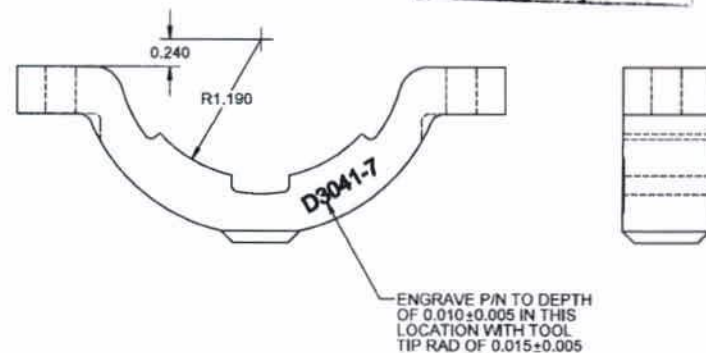
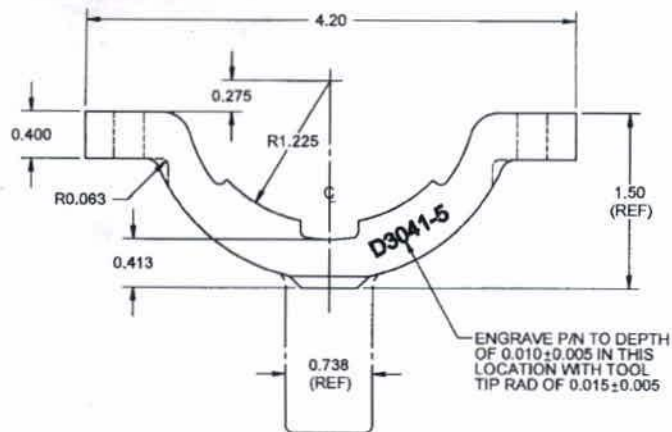
C	06.10.18	CHANGED BEARING HOLE TOLERANCE
B	06.06.05	CHG TO RND END DETAIL, 0.063 WAS 0.032, ADD TOL. & D3041-5A-7
A	01.06.28	NEW ISSUE
REV	DATE	DESCRIPTION
DESIGN	DRAWN BY	<b>DART AEROSPACE USA, INC.</b>
CHECKED	APPROVED	PORT HADLOCK, WA
DATE	DRAWING NO.	REV. C
06.10.18	D3041	SHEET 1 OF 2
	TITLE	SCALE
	CLAMP	1:1

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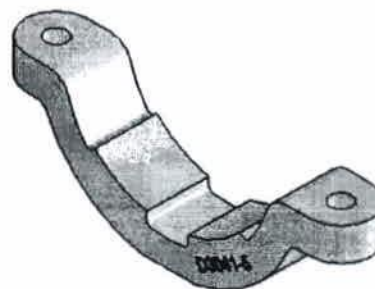
RELEASED

dc. 11-17



**D3041-7 CLAMP**  
(SAME AS D3041-5  
EXCEPT AS SHOWN)

**D3041-5 CLAMP**



**NOTES:**

- 1) MATERIAL: MANUFACTURE FROM D2423 EXTRUSION
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP CORNERS 0.010 TO 0.020
- 6) PART IS SYMMETRIC ABOUT C

NO  
WORK  
ORDER  
RETURN  
TO  
ENGINEERING  
UNCONTROLLED  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE

DESIGN 90	DRAWN BY CB	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3041	REV. C SHEET 2 OF 2
DATE 06.10.18	TITLE CLAMP	SCALE 1:1	
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